Amendments to the claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A compound of formula (I):

$$\begin{array}{c|c}
A - N & B \\
W_1 & W_4 \\
W_2 & W_3
\end{array}$$

$$\begin{array}{c|c}
W_1 & W_4 \\
W_2 & W_3
\end{array}$$

$$\begin{array}{c|c}
Z_5 \\
Z_4
\end{array}$$

$$\begin{array}{c|c}
Z_5 \\
Z_4
\end{array}$$

$$\begin{array}{c|c}
Z_1 & Z_4
\end{array}$$

wherein:

one of Z_1 , Z_2 , Z_3 , Z_4 and Z_5 is N, one is CR^{1a} and the remainder are CH, or one or two of Z_1 , Z_2 , Z_3 , Z_4 and Z_5 are independently CR^{1a} and the remainder are CH;

R¹ and R¹a are independently hydrogen; hydroxy; (C_{1-6}) alkoxy unsubstituted or substituted by (C_{1-6}) alkoxy, amino, piperidyl, guanidino or amidino any of which is optionally N-substituted by one or two (C_{1-6}) alkyl, acyl or (C_{1-6}) alkylsulphonyl groups, CONH2, hydroxy, (C_{1-6}) alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy or (C_{1-6}) alkylsulphonyloxy; (C_{1-6}) alkoxy-substituted (C_{1-6}) alkyl; halogen; (C_{1-6}) alkyl; (C_{1-6}) alkylthio; trifluoromethyl; trifluoromethoxy; nitro; cyano; azido; acyl; acyloxy; acylthio; (C_{1-6}) alkylsulphonyl; (C_{1-6}) alkylsulphoxide; arylsulphonyl; arylsulphoxide or an amino, piperidyl, guanidino or amidino group optionally N-substituted by one or two (C_{1-6}) alkyl, acyl or (C_{1-6}) alkylsulphonyl groups; provided that when Z_1 , Z_2 , Z_3 , Z_4 and Z_5 are CR¹a or CH, then R¹ is not hydrogen;

W₁, W₂, W₃ and W₄ are each independently selected from N or CR³;

each R³ is independently selected from:

hydrogen; hydroxy; halogen; trifluoromethyl; trifluoromethoxy; cyano; nitro; azido; acyl; acyloxy; acylthio; amino, mono- and di- (C_{1-6}) alkylamino; and substituted and unsubstituted (C_{1-6})alkoxy, (C_{1-6})alkyl, (C_{3-7})cycloalkyl, aminocarbonyl, (C_{1-6})alkylthio, (C_{1-6})alkylsulphonyl, and (C_{1-6})alkylsulphoxide;

A is (CRR)n;

B is $(CRR)_m$, C=O, or SO_2 :

n is 1 or 2;

m is 1 or 2

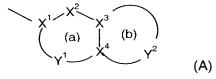
provided that when n is 1, m is 2; when n is 2, m is 1; and when B is C=O or SO₂ then n is 2;

each R is independently selected from

hydrogen; halogen; trifluoromethyl; trifluoromethoxy; cyano; nitro; azido; acyl; acyloxy; acylthio; amino, mono- and di- (C_{1-6}) alkylamino; and substituted and unsubstituted (C_{1-6})alkoxy, (C_{1-6})alkyl, (C_{3-7})cycloalkyl, aminocarbonyl,

(C₁₋₆)alkylthio, (C₁₋₆)alkylsulphonyl, and (C₁₋₆)alkylsulphoxide;

R² is a substituted or unsubstitued bicyclic carbocyclic or <u>unsubstituted bicyclic</u> heterocyclic ring system of formula (A):



containing up to four heteroatoms in each ring in which

ring (a) is <u>substituted or unsubstituted pyridine</u> <u>aromatic</u> and ring (b) is <u>substituted or unsubstituted non-aromatic</u> <u>aromatic or non-aromatic</u>;

X¹ is C⋅

X² is N or CR⁴, NR⁶, O, S(O)x, CO, CR⁴ or CR⁴R⁵;

X³ and X⁴ are each independently N or C;

Y¹ is a 1 to 2 atom linker group each atom of which is independently selected from N and CR⁴;

Y² is a <u>4 atom linker group having S bonded to X⁴ and NHCO bonded via N to X³ in which the other atom is CR⁴R⁵ 2 to 6 atom linker group, each atom of Y² being independently selected from N, NR⁶, O, S(O)x, CO, CR⁴ and CR⁴R⁵;</u>

each R^4 and R^5 is independently selected from: hydrogen; (C_{1-4}) alkylthio; halo; carboxy(C_{1-4})alkyl; halo(C_{1-4})alkoxy; halo(C_{1-4})alkyl; (C_{1-4})alkyl; (C_{2-4})alkenyl; (C_{1-4})alkyl; halo(C_{1-4})alkoxy; halo(C_{1-4})alkyl; (C_{2-4})alkenyloxycarbonyl; (C_{2-4})alkenyloxycarbonyl; (C_{2-4})alkenyloxycarbonyl; (C_{1-4})alkyl; hydroxy; hydroxy(C_{1-4})alkyl; mercapto(C_{1-4})alkyl; (C_{1-4})alkoxy; nitro; cyano; carboxy; amino or aminocarbonyl is optionally substituted by (C_{1-4})alkoxycarbonyl, (C_{1-4})alkylcarbonyl, (C_{2-4})alkenyloxycarbonyl, (C_{1-4})alkyl or (C_{2-4})alkenyl and optionally further substituted by (C_{1-4})alkyl or (C_{2-4})alkenyl; (C_{2-6})alkenyl; (C_{2-6})alkenyl; or aminosulphonyl wherein the amino group is optionally mono- or di-substituted by (C_{1-4})alkyl or (C_{2-4})alkenyl; aryl; aryl(C_{1-4})alkyl; aryl(C_{1-4})alkoxy; or R^4 and R^5 may together represent oxo; and

each R^6 is independently hydrogen; trifluoromethyl; (C_{1-4}) alkyl unsubstituted or substituted by hydroxy, (C_{1-6}) alkoxy, (C_{1-6}) alkylthio, halo or trifluoromethyl; (C_{2-4}) alkenyl; aryl; aryl (C_{1-4}) alkyl; arylcarbonyl; heteroarylcarbonyl; (C_{1-4}) alkoxycarbonyl; (C_{1-4}) alkylcarbonyl; formyl; (C_{1-6}) alkylsulphonyl; or aminocarbonyl wherein the amino group is optionally substituted by (C_{1-4}) alkoxycarbonyl, (C_{1-4}) alkylcarbonyl, (C_{2-4}) alkenyloxycarbonyl, (C_{2-4}) alkenylcarbonyl, (C_{2-4}) alkenylcarbonyl, and optionally further substituted by (C_{1-4}) alkyl or (C_{2-4}) alkenyl; and each x is independently 0, 1, or 2; or a pharmaceutically acceptable salt thereof.

- 2. (Original) A compound according to claim 1 wherein Z_5 is CH or N, Z_3 is CH or CF and Z_1 , Z_2 and Z_4 are each CH, or Z_1 is N, Z_3 is CH or CF and Z_2 , Z_4 and Z_5 are each CH.
- 3. (Original) A compound according to claim 1 wherein R^1 is methoxy and R^{1a} is H or when Z_3 is CR^{1a} it may be C-F.
- 4. (Original) A compound according to claim 1 wherein:
- a) W₁-W₄ are independently CR³;
- b) W_1 , W_3 and W_4 are N and W_2 is CR^3 ;
- c) W₂ is N and W₁, W₃ and W₄ are independently CR³;
- d) W₃ is N and W₁, W₂ and W₄ are independently CR³; or
- e) W₄ is N and W₁-W₃ are independently CR³.
- 5. (Original) A compound according to claim 1 wherein R^3 is independently selected from hydrogen, substituted and unsubstituted (C_{1-6})alkoxy, and NH₂.
- 6. (Original) A compound according to claim 1 wherein R is independently selected from hydrogen, substituted and unsubstituted (C_{1-6})alkyl, CONH₂, COOH, hydroxy, halogen, and substituted and unsubstituted (C_{1-6})alkoxy.
- 7. Canceled.
- 8. (Currently amended) A compound according to claim 1 wherein R² is selected from 4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one-6-yl and 1*H*-pyrido[3,2-*b*][1,4]thiazin-2-one-7-yl 4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one-6-yl, 4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one-6-yl, 1,2,3,4-tetrahydro-[1,8]naphthyridine-7-yl, 1*H*-pyrido[3,2-*b*][1,4]thiazin-2-one-7-yl,

4*H*-benzo[1,4]oxazin-3-one-6-yl, and 6-fluoro-2,3-dihydrobenzo[1,4]dioxine-7-yl.

- 9. (Currently amended) A compound according to claim 1 which is:
- 6-({2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)phenyl]ethylamino}methyl)-4*H*-benzo[1,4]thiazin-3-one;
- 6-({2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)phenyl]ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;
- 6-({2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)phenyl]ethylamino}methyl)-4H-pyrido[3,2-b][1,4]oxazin-3-one;
- 3-Oxo-3,4-dihydro-2*H*-benzo[1,4]thiazine-6-sulfonic acid {2-[4-(6-methoxy-[1,5]naphthyridin-4-yl)phenyl]ethyl}amide;
- {2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)phenyl]ethyl} (5,6,7,8-tetrahydro[1,8]naphthyridin-2-ylmethyl)amine;
- $6-\{[4-(6-Methoxy-[1,5]naphthyridin-4-yl)benzylamino]methyl\}-4H-benzo[1,4]thiazin-3-one; \\$
- $7-(\{2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)phenyl]ethylamino\}methyl)-1$ pyrido[3,2-b][1,4]thiazin-2-one;
- 6-{2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)benzylamino]ethyl}-4H-benzo[1,4]oxazin-3-one;
- 6-{2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)benzylamino]ethyl}-4H-benzo[1,4]thiazin-3-one;
- (7-Fluoro-2,3-dihydrobenzo[1,4]dioxin-6-ylmethyl){2-[6-(6-methoxy[1,5]naphthyridin-4-yl)[1,2,4]triazin-3-yl]ethyl}amine;
- $6-({2-[4-(6-Methoxyquinolin-4-yl)phenyl]ethylamino}methyl)-4H-pyrido[3,2-b][1,4]oxazin-3-one;$
- $6-(\{2-[4-(6,8-difluoroquinolin-4-yl)phenyl]ethylamino\}methyl)-4H-pyrido[3,2-b][1,4]thiazin-3-one;$
- $6-(\{2-[4-(8-Fluoro-6-methoxyquinolin-4-yl)phenyl]ethylamino\}methyl)-4H-pyrido[3,2-b][1,4]thiazin-3-one; \\$
- 6-({2-[6-(6-methoxy-[1,5]naphthyridin-4-yl)pyridin-3-yl]ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;
- 6-({2-[5-(6-methoxy-[1,5]naphthyridin-4-yl)pyridin-2-yl]ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;

6-({2-[6-(6-methoxy-[1,5]naphthyridin-4-yl)pyridin-3-yl]ethylamine}methyl)-4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one;

 $N-(2,3-dihydro[1,4]dioxino[2,3-c]pyridin-7-ylmothyl)-2-{6-[6-(methyloxy)-1,5-naphthyridin-4-yl]-3-pyridinyl}ethanamine;$

 $N-(2,3-dihydro[1,4]dioxino[2,3-c]pyridin-7-ylmethyl)-2-{5-[6-(methyloxy)-1,5-naphthyridin-4-yl]-2-pyridinyl}ethanamine;$

N-(2-{6-[6-(methyloxy)-1,5-naphthyridin-4-yl]-3-pyridinyl}ethyl)-3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazine-6-carboxamide; and

N-(2-{5-[6-(methyloxy)-1,5-naphthyridin-4-yl]-2-pyridinyl}ethyl)-3-oxo-3,4-dihydro-2*H*-pyrido[3,2-*b*][1,4]thiazine-6-carboxamide; or a pharmaceutically acceptable salt thereof.

- 10. (Original) A pharmaceutical composition comprising a compound according to claim 1 and a pharmaceutically acceptable carrier.
- 11. (Original) A method of treating bacterial infections in mammals which comprises the administration to a mammal in need thereof an effective amount of a compound according to claim 1.
- 12. (New) A compound according to claim 1 wherein X^2 is N and Y^1 is a 2 atom linker group each atom of which is independently CR^4 .